

# Cryogenic Engineering Centre

Indian Institute of Technology, Kharagpur

## INVITATION FOR TENDER

IIT/KGP/CRYO/ENQ/VA/EPU/2019/18

Date:16-01-2019

### Electric Polarization Unit

Sealed tenders are invited in Two-bid System in two separate sealed envelopes (one for Technical specifications and the other for Commercial offers) from eligible Indian manufacturers/suppliers or foreign manufacturers through their Direct Indian Agents for the supply of the following equipment.

If any Indian Agent quotes on behalf of Foreign Principal, in that case, as per GFR Rule, Vendor Registration Number from DGSD under Ministry of Commerce, Government of India, and copy of business agreement are to be submitted along with quotation (in the Envelope containing the Technical Bid) failing which the quotation would not be considered.

- Both the envelopes must be sealed and should clearly be marked on top of envelope about type of envelope (i.e., technical/price bid), tender reference no. and name of agency submitting the bid. The technical bid should not have any price indication.
- These two envelopes, mentioned above, must be in a larger envelope with tender reference number and name of the agency clearly written over it.
- Bids, those are not following two-bid system, will be cancelled.

Please send offers, along with descriptive catalogue/brochure. The validity of the bid should be at least 120 days from the last date of submission. Please ensure that your quotation reaches this office not later **7<sup>th</sup> February, 2019 at 1500 hrs.** at the following address:

Head of the Centre  
Cryogenic Engineering Centre  
Indian Institute of Technology Kharagpur  
Kharagpur 721302, West Bengal, India.  
Kind Attention: Dr. Venimadhav Adyam

**Last Date of Submission of Quotation:** 7<sup>th</sup> February (~~Tuesday~~) 2019, 1500 hrs.

**Validity:** 120 days from the last date of submission

**Last Date of Tender Opening:** 7<sup>th</sup> February (~~Tuesday~~) 2019, 1600 hrs

Copy to :

- 1) Institute website
- 2) CPP Portal
- 3) Chairman Purchase Committee
- 4) Jt. Registrar (S&P)

**Technical specification of Tender for Electric Polarization unit**

Description			Specifications Required
Voltage range (built-in)			±100V
Voltage expandable to external amplifier			10KV
Analog to digital Converter			18 Bits
Minimum Leakage Current			2pA
Internal Clock			25ns
Charge Resolution	Minimum		20fC
	Maximum		250µC
Area Resolution	Minimum		2µ <sup>2</sup>
	Maximum		2cm <sup>2</sup>
Hysteresis frequency	Minimum		0.05Hz
	Maximum		5KHz @ 100V or better
Pulse character	Pulse width	Min.	50µs
		Max.	1s
	Pulse rise		50µs
	Pulse delay		40ks
Small Signal Cap Frequency	Minimum		1Hz
	Maximum		10KHz
Electrometer Input All Test Frequencies for all test at any speed			Yes
Measurement capability with software			<ul style="list-style-type: none"> <li>• Hysteresis</li> <li>• Leakage</li> <li>• Charge</li> <li>• Fatigue</li> <li>• PUND</li> <li>• Small signal CV</li> <li>• Retention</li> <li>• Piezoelectric displacement</li> </ul>
Software Programs for			<ul style="list-style-type: none"> <li>• Piezoelectric</li> <li>• Magneto electric</li> <li>• Transistor</li> <li>• Pyroelectric</li> </ul>
COMM channel			2
Sensor			2
Operating system compatibility			Windows 7 or above
Hardware compatibility			LabVIEW 10.0 or above
Software driver			LabVIEW 10.0 or above
External interfaces			USB / LAN/ GPIB/ RS-232C
Additional requirement			Manuals in English

*Adh*

### Techno-commercial conditions

- a. Interested original equipment manufacturers or dealers or agents may submit their quotations in **two bid systems** (technical and commercial).
- b. **Warranty – minimum 1 years** from the **date of installation and commissioning at the site.**
- c. Scope of supply should include **free installation, commissioning and training at site.**
- d. Please provide **list of such supplied systems in India and abroad** both in academics and industry.
- e. **Validity** of the quotation should be **120 days from last date of submission**
- f. In the technical bid, vendors have to give a technical compliance certificate along with the technical literature.
- g. Compliance statement is to be submitted as per our technical specification. Claim for compliance should be traceable to your brochure. Please mention page number etc. of your brochure for easy traceability.
- h. Commercial bid is to be provided in clearly marked separate sealed envelope.
- i. If any Indian Agent quotes on behalf of Foreign Principal, in that case, as per GFR Rule, vendor registration number from DGSD under Ministry of Commerce, Government of India, and copy of business agreement is to be submitted along with quotation.
- j. **Last date of submission of sealed quotation is 07<sup>th</sup> February (Thursday) 2019, 1500 hrs.**
- k. **Last date of Opening Tender is 07<sup>th</sup> February (Thursday) 2019, 1600 hrs.**
- l. The envelope should have the following number on the top and submitted to the office of

IIT/KGP/CRYO/ENQ/VA/EPU/2019/18

Head of the Centre

Cryogenic Engineering Centre, I.I.T. Kharagpur,

West Bengal-721302, INDIA

(Attn: Dr. Venimadhav Adyam)

- m. Regarding this purchase, **the decision of the Director would be final and binding.**
- n. Payment terms for foreign firms: **100% payment through irrevocable L/C.**
- o. Payment terms for **Indian firms**
  - a) 100% payment against delivery through electronic transfer.
  - b) Ensure mentioning: -
    - i. Bank details of the beneficiary and PAN number.
    - ii. Full name and address of the beneficiary on whom order has to be placed.